

Utah Achievement Trends

How are we doing?



SCIENCE

4th Grade Performance

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4th Grade

SCIENCE ACHIEVEMENT

The bottom line...

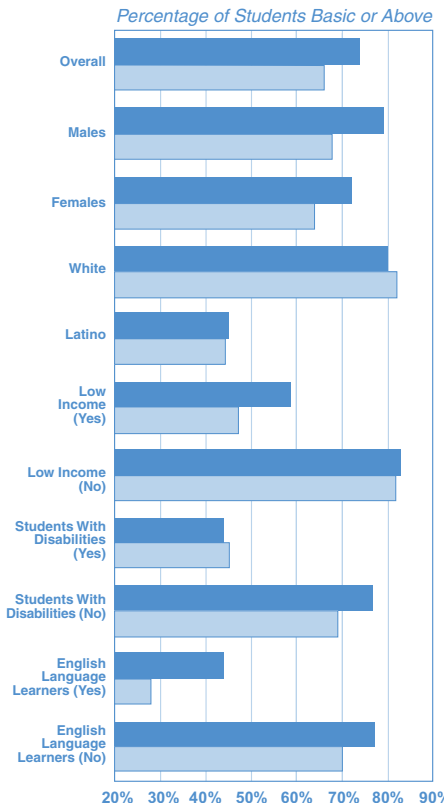
- In general, there is strong 4th grade science performance, with some groups demonstrating ongoing improvement.
- Statewide, Utah is significantly higher than the nation and also significantly higher in most groups on NAEP*. The nation as a whole is also showing some gains.
- In addition, some groups are demonstrating improvement on the Utah Science Core CRTs**.
- Even with this improvement in elementary science, there remains a substantial science achievement gap on all our assessments (i.e., Utah Core CRT, NAEP, Iowa).
- Groups with the largest achievement gaps are Latinos, English language learners, African Americans, American Indians, and students with disabilities.
- There is some evidence for a narrowing of the achievement gap for Latinos, Pacific Islanders, students with disabilities, and American Indian students.

* NAEP—The National Assessment of Educational Progress. A representative sample of Utah 4th grade students take NAEP every two years. To learn more, go to <http://nces.ed.gov/nationsreportcard/>.

** Utah Core CRTs—A state-developed assessment specifically designed to measure student understanding of the Core Curriculum.

NAEP 4th Grade Science Performance

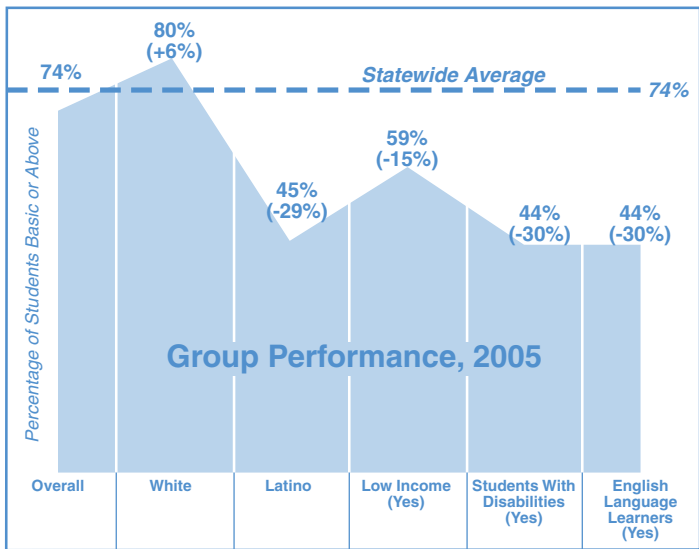
■ Utah ■ Nation, 2005



- Overall in Utah there is strong 4th grade science performance.
- Utah maintains a statistically significant performance advantage over the nation in most (7 of 11) groups (see NAEP data table).
- Some of the largest performance differences favoring Utah are for students who are low-income and students who are English language learners.
- The nation overall has some gain from 2000 to 2005, but Utah remains higher in many groups (see NAEP data table).

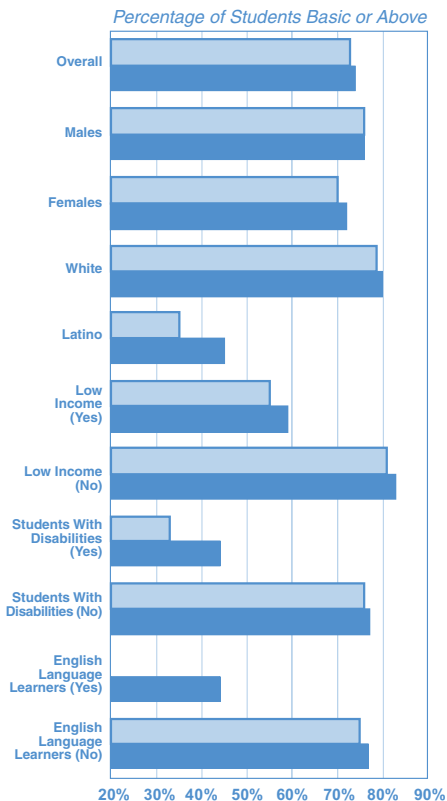
Utah's 2005 NAEP 4th Grade Science

ACHIEVEMENT GAP



- There are substantial achievement gaps for Latinos, English language learners, and students with disabilities in 4th grade science. The groups with the largest gaps are the same groups as in elementary math.
- These NAEP achievement gaps in percentages at or above basic range from -15% to -30% for these groups. This means almost one-third of students in these groups are performing below the state average.

NAEP 4th Grade Science PERFORMANCE TREND



Utah

2000 2005

- Several groups are showing improvement in NAEP from 2000 to 2005.
- There appears to be positive narrowing in some of the achievement gaps in 4th grade elementary science.
- Compared to the state, Latinos (up 10%), and students with disabilities (up 11%) are making substantial gains.
- This pattern is encouraging and is similar to gains observed on the Utah Core CRTs in 4th grade science.

Utah NAEP Science

Grade 4

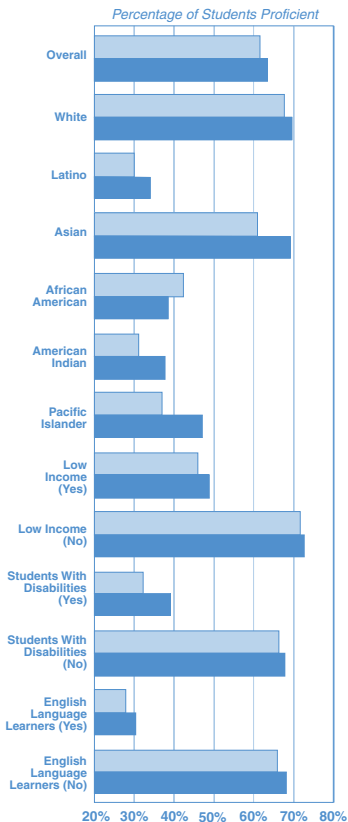
Achievement—Percentage at or Above Basic

| Group | Utah | | Imp ^b Direction | Nation | | | Utah vs. Nation 2005 | Sig ^d |
|----------------------------------|------------------|------|-------------------------------|--------|---------|------------------|----------------------------|------------------|
| | 2000 | 2005 | | 2000 | 2005 | Dir ^c | | |
| Overall | 73% ^a | 74% | level | — | 61% 66% | up 5 | 8% | * |
| Males | 76% | 76% | level | — | 62% 68% | up 4 | 8% | * |
| Females | 70% | 72% | up 2 | — | 59% 64% | up 5 | 8% | * |
| White | 79% | 80% | level | — | 76% 82% | up 6 | -2% | — |
| African American | — | — | — | — | 30% 38% | up 8 | | NA |
| Latino | 35% | 45% | up 9 | yes | 33% 44% | up 11 | 1% | — |
| Low Income (Yes) | 55% | 59% | up 4 | yes | 39% 47% | up 8 | 12% | * |
| Low Income (No) | 81% | 83% | up 2 | — | 76% 82% | up 6 | 1% | — |
| Students With Disabilities (Yes) | 33% | 44% | up 11 | — | 35% 45% | up 10 | -1% | — |
| Students With Disabilities (No) | 76% | 77% | level | — | 63% 69% | up 6 | 8% | * |
| English Lang. Learners (Yes) | — | 44% | — | — | 13% 28% | up 15 | 16% | * |
| English Lang. Learners (No) | 75% | 77% | up 2 | — | 64% 70% | up 6 | 7% | * |

- a **Percent** indicates the percentage of 4th grade science students who scored at or above the basic level on the NAEP assessment.
- b **Improving** means increasing the percentage of students scoring at basic or above on NAEP.
- c **Direction** indicates the change in percentage of students who scored at or above basic between 2000 and 2005.
- d The asterisk indicates a statistically **significant** difference ($p < .05$) between Utah in 2005 with the nation in 2005.

“Utah Achievement Trends” is a Utah NAEP publication. This report is available at www.schools.utah.gov/eval/Info_NAEP.asp.

4th Grade Performance Trend



■ 2004 ■ 2006

Utah Science Core CRT

- There is an upward statewide trend for almost all groups in 4th grade elementary science achievement. This is good news.
- Substantial achievement gaps remain for several groups, however—most notably for American Indians, Latinos, African Americans, English language learners, and students with disabilities. In general, one-fourth to one-third more students in these groups are not reaching proficiency on core science standards.
- There is also a downward achievement trend of African Americans.
- The achievement gap appears to be narrowing for Pacific Islanders, students with disabilities, American Indians, and Latinos. This is encouraging and needs to continue.

Utah Core CRT Science

Grade 4

Achievement—Percentage of Students Proficient

| Group | Percentage* | | | Utah Direction 2004–06 | Gap 2006 State Avg — Group |
|----------------------------------|-------------|-------|-------|---------------------------|----------------------------------|
| | 2004 | 2005 | 2006 | | |
| Overall | 61.8% | 63.1% | 63.7% | up 2 | — |
| White | 67.9% | 69.1% | 69.8% | up 2 | +6.1% |
| Latino | 30.3% | 32.7% | 33.8% | up 2 | -29.9% |
| Asian | 61.0% | 65.3% | 68.9% | up 8 | +5.2% |
| African American | 43.3% | 41.5% | 38.6% | down 5 | -25.1% |
| American Indian | 31.7% | 34.0% | 37.5% | up 6 | -26.2% |
| Pacific Islander | 36.7% | 40.5% | 47.1% | up 10 | -16.6% |
| Low Income (Yes) | 46.0% | 48.0% | 48.8% | up 3 | -14.9% |
| Low Income (No) | 71.5% | 72.6% | 72.6% | level | +8.9% |
| Students with Disabilities (Yes) | 32.4% | 35.2% | 39.3% | up 7 | -24.4% |
| Students With Disabilities (No) | 66.5% | 67.7% | 67.9% | level | +4.2% |
| English Lang. Learners (Yes) | 27.6% | 28.1% | 30.5% | up 3 | -33.2% |
| English Lang. Learners (No) | 66.2% | 67.4% | 67.9% | up 2 | +4.2% |

- a Number of students enrolled and tested during spring 2006: Overall State 38,900, White 31,272, Latino 5,234, Asian 655, African American 541, American Indian 525, Pacific Islander 548, Low Income (Yes) 14,575, Low Income (No) 24,325, Students with Disabilities (Yes) 5,683, Students with Disabilities (No) 33,217, English Language Learners (Yes) 4,797, English Language Learners (No) 34,120.

- b **Percentage** indicates the percentage of 4th grade science students who scored Proficient (Level 3 or Level 4) on the Utah Core CRT.

